Bureau of Waste Management
Curtis State Office Building
1000 SW Jackson, Suite 320
Topeka, KS 66612-1366

phone: 785-296-1600
fax: 785-296-1592
email: bwmweb@kdheks.gov
www.kdheks.gov/waste

Robert Moser, MD, Secretary.

Kansas
Department of Health & Environment

Sam Brownback, Governor

November 4, 2014

Brenda B. Epperson
Environmental Manager
MRP Properties Company, LLC
P.O. Box 696000
San Antonio, TX 78269-6000

RE: Comments on the Soil Investigation Work Plan
MRP Properties Company, LLC
1400 South M Street, Arkansas City, Kansas
RCRA ID# KSD087418695

RCRA
534458

Dear Ms. Epperson,

The Kansas Department of Health and Environment (KDHE) and the Environmental Protection Agency (EPA) Region 7 reviewed MRP's document dated August 29, 2014, submitted by MWH Americas, Inc. on behalf of MRP Properties Company, LLC (MRP) for the Former Total Petroleum Refinery in Arkansas City. The Human Health Risk Assessment (HHRA) Work Plan is required under Section III.H. of the Part II Permit. The soil investigation work plan summarizes existing soil data and describes sampling locations and protocols to address data gaps with the soil data. KDHE and EPA have the following comments:

1. **Section 2.2 (p. 2-2).** MRP states that Exposure Unit 11 (EU-11) only includes SWMU-25 (No. 3 Oil Trap). The No. 3 Oil Trap was described in the Phase II RFI as a segmented concrete tank used to skim waste water. A small depression lies directly north of SWMU-25 and a small open area lies directly to the southwest. These areas should be included in the soil investigation because they are not associated with the Oxidation Ponds, Evaporation Pond 3, or the No. 3B Pond that will be addressed as separate units. KDHE requests that MRP expand the boundaries for Exposure Unit 11 to include the above described areas. Please refer to the attached figure. Please review the proposed boundaries of EU-11 and revise the appropriate text and figures.

2. **Section 2.2.1 (pp. 2-2 and 2-3), Table 2-2, and Table 2-4.** MRP states that soil sampling depths are divided into two soil horizons, surface soil from 0-2 feet below ground surface (bgs), and subsurface soil from 2-10 feet bgs. The subsurface soil is further divided into 2-4 feet and 4-10 feet bgs intervals. This soil sampling protocol is similar to the sampling plan used for the 2010 Exposure Unit Supplemental Soil Investigation (EUSSI). However, upon review of the sampling depths for new sampling locations shown in Table 2-2 and 2-4 for Phase II soil sampling, MRP plans to collect one subsurface at 0-2 feet and one subsurface soil sample at 2-10 feet instead of three separate samples at 0-2 feet, 2-4 feet, and 4-10 feet. KDHE concurs with increasing the depth of investigation from 8 feet to 10 feet bgs and generally agrees to MRP collecting one soil sample at 2-10 feet, but requests that if visual staining or elevated PID readings result in the subsurface sample being collected below the 8 foot depth, MRP will advance the borehole to the soil/water interface or 15 feet bgs, whichever is encountered first, and collect a third sample to assist in delineation of the vertical extent of contamination.

3. **Section 2.3.1 (pp. 2-3 and 2-4).** The objective of the upcoming Phase I soil investigation is to analyze for chromium (VI) in areas where greater than 37 mg/kg total chromium has been detected in soil. The 37 mg/kg value selected for comparison represents a nationwide background average for chromium (VI). Generally, EPA would have elected to use either a risk-based or a site-specific background concentration as the comparison value. However, since 37 mg/kg represents an excess individual lifetime cancer risk of 6E-06 and a non-cancer hazard quotient of 0.01 to industrial workers, it may be used.

4. **Section 2.3.1 (pp. 2-3 and 2-4), Table 2-3, and Figure 2-3.** Section 2.3.1 describes the collection and analysis of soil samples at previously sampled locations where total chromium was detected at elevated levels. KDHE has reviewed the proposed locations for hexavalent chromium soil sampling and noted several locations that had detected chromium concentrations exceeding 37 mg/kg but were not included in Table 2-3 or Figure 2-3. KDHE requests that MRP add the following locations and depths:

   - SWMU 12-1 0-2 feet bgs Exposure Unit 7
   - SWMU-12-1 2-4 feet bgs Exposure Unit 7

5. **Section 2.3.1 (p. 2-4).** MRP states in Section 2.3.1 that total chromium in soil will be analyzed using Method 6020A. The current Quality Assurance Project Plan (QAPP) does not include the Method Detection Limit (MDL) and Reporting Limits (RL) for total chromium using Method 6020A. Please revise the QAPP to include the MDL and RL for total chromium using Method 6020A. KDHE would appreciate if MRP would provide an updated copy of the QAPP for review.

6. **Section 2.4 (p. 2-4), Table 2-2, Table 2-4, and Figures 2-4 through 2-6.** Sampling locations and depths intervals for the Phase II soil investigation are described in Section 2.4, listed in Table 2-2 and 2-4, and depicted in Figures 2-4, 2-5, and 2-6.

   a. KDHE is generally agreeable with the sampling locations depicted in Figures 2-4 through 2-6 but would like to discuss modifications to several of the tank farm locations based on data collected during the 1999 Phase II investigation.

   b. MRP states that the criteria for selecting the Phase II soil sampling intervals is described in the EUSSI Field Sampling Plan dated October 14, 2010 but KDHE is unable to find any reference to specific sampling intervals in the above referenced plan. Interval selection criteria for soil sampling are discussed in the EUSSI Work Plan. Please verify your October 10, 2014 reference for the sampling intervals proposed for the Phase II investigation.

7. **Section 2.4 (p. 2-4), Figure 2-4, Figure 2-5, and Figure 2-6.** The last paragraph of Section 2.4 discusses soil sampling for determining background arsenic concentrations at the facility but does not mention whether MRP plans to use the arsenic background sampling data from the 2010 investigation or how MRP will calculate the final background concentration numbers. MRP has currently proposed collecting background soil samples for arsenic at three depth intervals for eight locations to calculate background levels. If MRP expects different concentrations at each of the depth intervals (e.g., due to different soil layers), it may not be appropriate to combine all 24 samples when calculating a background value. EPA suggests adding four additional background sampling locations, for a total of 12 planned samples per depth, to allow sufficient data for statistical outlier testing and calculating of background threshold values. Please review the current number of background sampling locations and expand your discussion of the arsenic background study to include how MRP will evaluate the sample

data and calculate a background concentration value for arsenic.

8. **Section 4.3 (p. 4-1).** This section describes headspace screening procedures for soil sampling. The section notes that subsamples of soil will be placed in Ziploc bags and allowed to sit at ambient temperature before being screened with a PID. This can be misleading since ambient temperatures can vary widely due to seasonal conditions. Ambient temperature should be further defined as a temperature of at least 70 degrees Fahrenheit.

Please respond to these comments by December 3, 2014 and submit revised pages as necessary. I would recommend a conference call between all parties to address any points of concern. If you have any questions, please contact me by phone at (785)-291-3760 or e-mail at (mvishnefske@kdheks.gov). Brad Roberts (EPA) can be contacted at (913)-551-7279 or e-mail at (roberts.bradley@epa.gov).

Sincerely,

Mark Vishnefske
Environmental Scientist III
Hazardous Waste Corrective Action and Geology Unit

cc: Jay Mednick – MWH
Brad Roberts – EPA Region VII - AWMD/WRAP
Allison Herring – DEA/SCDO/Waste Programs
Bill Bider – BWM